



U.S. PATENT AND TRADEMARK OFFICE  
AMENDMENT TRANSMITTAL FORM


IPW

A42168  
Docket Number

In re the Application of Thomas R. Maher et al.  
Serial No.: 10/743,363  
Filed: December 22, 2003  
For: VARIABLE CONDITION RESPONSIVE  
SENSE SYSTEM AND METHOD

Confirmation No.:  
Art Unit: 2856  
Examiner:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

<b>MAILING CERTIFICATE</b> I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 today.  Russell E. Baumann Date 11/30/04
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Sir:

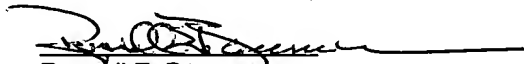
Transmitted herewith is an amendment in the above-identified application.

The fee has been calculated as shown below:

CLAIMS AS AMENDED						
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE
Total Claims	17	Minus	20	= 0	x \$18 =	\$ 0.00
Independent Claims	3	Minus	3	= 0	X \$88 =	\$ 0.00
TOTAL ADDITIONAL FEE FOR THIS AMOUNT						\$ 0.00

Charge the total additional fee, and any further fees, or credit overpayment to deposit account no. 20-0670. Two duplicate copies of this sheet are enclosed.

Texas Instruments Incorporated  
34 Forest Street, MS 20-21  
Attleboro, MA 02703

  
Russell E. Baumann  
Attorney for Applicant  
Registration No. 27,418  
(508) 236-3314

CUSTOMER NO. 25946



11-30-04/dmg File A42168

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Customer No.: 25946

Preliminary Amendment

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Please amend the above-identified application as follows:

Amend claims 9 and 11 as follows:

- 1 9. (Currently Amended) A variable condition responsive sense element system
- 2 comprising
- 3 a plurality of variable condition responsive sense elements providing an
- 4 output dependent on the variable condition, the variable condition being one of
- 5 pressure, acceleration, force and torque, the sense elements each having first and
- 6 second half bridges, each bridge half having a bias node, a ground node and a
- 7 respective positive and minus output node,
- 8 a voltage source,

-2-

an electronic circuit having first, second, third and fourth multiplexers, each having an output and a plurality of address input positions, a respective independent variable resistor connected in series between the voltage source and the output of each of the first and third multiplexers, the bias node of each half bridge of each sense element connected to a respective multiplexer address position of the respective first and third multiplexers, separate signal conditioning paths, the minus output node of each sense element connected to a respective multiplexer address position of the second multiplexer, the positive node of each sense element connected to a respective multiplexer address position of the fourth multiplexer, a respective separate signal path connected to the output of each multiplexer, an analog to digital converter having a plurality of inputs and an output, the signal paths being connected to the inputs of the analog to digital converter, a data register having an input and an output, the output of the analog to digital converter connected to the input of the data register, a data transfer circuit connected to the data register and having connections for an external controller, said data transfer circuit capable of transferring data to and from the external controller, and ~~data transmitted to and received from the external controller through the data transfer circuit~~ a memory, the memory ~~section~~ being connected to the data transfer circuit, the memory providing analog trim settings for the sense element signal paths, and data for the external controller enabling the external controller to perform mathematical compensation for the variable condition sense element signals.

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